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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/929,153	08/13/2001	Jyh-Ming Jong	SUN-P5892-RJL	8905
28422	7590	11/03/2004	EXAMINER	
HOYT A. FLEMING III P.O. BOX 140678 BOISE, ID 83714			SINGH, DALZID E	
			ART UNIT	PAPER NUMBER
			2633	

DATE MAILED: 11/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/929,153

Applicant(s)

JONG ET AL.

Examiner

Dalzid Singh

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 August 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 August 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>8/11/01, 11/26/02, 03/23/04</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election of species in the reply filed on 06 August 2004 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claim 2 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim 2, in lines 2-4, recites, "... the phase locked-looped is operable to generate a plurality of clock signals that have a frequency higher than the frequency of the reference clock signal" In the specification on page 8, as originally filled, the phase-locked loop receives a reference clock signal and generates a plurality of clock signals. There was no structure of circuit diagram to teach a person of ordinary skill in the art how the frequency of the plurality of clock signal is higher than the reference clock signal. Based on this, the specification fails to provide an enabling disclosure for claim

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over the prior art disclose by applicant as shown in Fig. 2.

Regarding claim 1, the prior art discloses an optical transmitter for transmitting a first output data signal and a second output data signal, the optical transmitter comprising:

a) a phase-locked-loop (205), the phase-locked-loop operable to receive a reference clock signal (210);

b) a clock-recovery circuit (220), the clock-recovery circuit coupled to the phase-locked-loop, the clock-recovery circuit operable to receive a first input data signal;

c) a first latch-decision circuit (225), the first latch-decision circuit coupled to the clock-recovery circuit (220);

d) a first latch (230), the first latch coupled to the first latch-decision circuit (225), the first latch operable to receive the first input data signal (215);

e) a first electro-optical converter (235), the first electro-optical converter coupled to the first latch (230), the first electro-optical converter operable to transmit the first output data signal;

f) a second latch-decision circuit (255);

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g) a second latch (260), the second latch coupled to the second latch-decision circuit (255), the second latch operable to receive the second input data signal (245); and

h) a second electro-optical converter (265), the second electro-optical converter coupled to the second latch (260), the second electro-optical converter operable to transmit the second output data signal.

The prior art differs from the claimed invention in that the prior art does not specifically disclose that the second latch-decision circuit is coupled to the clock-recovery circuit. However, as shown in the figure, the second latch-decision circuit is coupled to the second clock-recovery which is coupled to the second phase-locked loop which is further coupled to the clock-recovery circuit (220). Therefore, based on this, it would have been obvious, if it is not inherent, that the clock signal from the clock recovery circuit (220) is used to run that the second phase-locked loop and the second latch-decision and hence coupling the clock recovery to the second latch-decision. One of ordinary skill in the art would have been motivated to do this in order to synchronized timing of the system.

Regarding claim 2 (as far as understood), on page 2, lines 7-8, the prior art discloses that the phase-locked-loop is operable to generate a plurality of clock signals.

Regarding claim 3, on page 2, lines 10-14, the prior art discloses that the plurality of clock signals has a phase that is not equal to the phase of the reference clock signal.

Regarding claim 4, on page 2, lines 16-19, the prior art discloses that the clock-recovery circuit is operable to extract timing information from the first input data signal.

Regarding claim 5, on page 2, lines 2-23 to page 3, lines 1-4, the prior art discloses that the first latch-decision circuit, based upon timing information received from the clock-recovery circuit, is operable to determine a time to latch the first input data signal.

Regarding claim 6, as shown in Fig. 2, the prior art shows the first latch-decision circuit (225) is operable to receive the first input data signal (215).

Regarding claim 7, as shown in Fig. 2, the prior art shows that the first latch-decision circuit (225) is operable to receive the first input data signal (215) and the second latch-decision circuit (255) is operable to receive the second input data signal (245).

Regarding claim 8, on page 2, lines 20-23 to page 3, lines 1-4, the prior art discloses that the first latch-decision circuit is operable to receive the first input data signal and, based upon information extracted from the first input data signal and timing information received from the clock-recovery circuit, is operable to determine a time to latch the first input signal.

Regarding claim 9, as shown in Fig. 2, the prior art shows that the first electro-optical converter (235) includes a laser (see page 3, lines 9-10).

Regarding claim 10, as shown in Fig. 2, the prior art shows that the first electro-optical converter (235) is operable to generate an optical signal that is compliant with an optical signal defined in the InfiniBand specification (see page 3, lines 9-11).

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Doi et al (US Patent No. 6,148,215) is cited to show clock generator comprising of phase-locked loop for generating plurality of clock signals.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dalzid Singh whose telephone number is (571) 272-3029. The examiner can normally be reached on Mon-Fri 9am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on (571) 272--3022. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DS
October 26, 2004

Dalzid Singh